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10/791,141	03/02/2004	Kevin I. Bertness	C382.12-0178	3178

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WESTMAN CHAMPLIN & KELLY, P.A.		PIGGUSH, AARON C	
SUITE 1400			
900 SECOND AVENUE SOUTH		ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55402-3319		2838	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/791,141	BERTNESS ET AL.
	Examiner	Art Unit	
	Aaron Piggush	2838	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*27 July 2006*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,9-54,56,109,111 and 112* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9-54,56,109,111 and 112* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>*02 March 2004*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>*See Continuation Sheet*</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :3/11/05, 12/27/04, 10/21/04, 8/23/04, 7/28/04.

DETAILED ACTION

Information Disclosure Statement

1.   It is desirable to avoid the submission of long lists of documents if it can be avoided.

Eliminate clearly irrelevant and marginally pertinent cumulative information. If a long list is

submitted, highlight those documents which have been specifically brought to applicant's

attention and/or are known to be of most significance. See *Penn Yan Boats, Inc. v. Sea Lark

Boats, Inc.*, 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972), *aff'd*, 479 F.2d 1338, 178 USPQ

577 (5th Cir. 1973), *cert. denied*, 414 U.S. 874 (1974). But *cf. Molins PLC v. Textron Inc.*, 48

F.3d 1172, 33 USPQ2d 1823 (fed. Cir. 1995). However, the five IDS documents (26 pages total)

submitted by the applicant have already been considered by the examiner.

Claim Objections

2.   Claim 56 is objected to because of the following informalities: It appears to also be a

typographical error wherein part of the subject matter of claim 56 was moved into the

independent claim 1, and therefore is repeating the subject matter already contained in claim 1.

The second part of claim 56 concerning "wherein the battery test does not include a load test" is

acceptable, however. Appropriate correction is required.

Double Patenting

3.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection
is appropriate where the conflicting claims are not identical, but at least one examined
application claim is not patentably distinct from the reference claim(s) because the examined
application claim is either anticipated by, or would have been obvious over, the reference
claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re
Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 and 48 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9 and 15 of U.S. Patent No. 6,351,102. Claim 2 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3, 9, and 15 of U.S. Patent No. 6,351,102. Claims 3 and 4 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4, 9, and 15 of U.S. Patent No. 6,351,102. Claims 9-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9, 15, and 18 of U.S. Patent No. 6,351,102. Claim 14 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12 and 15 of U.S. Patent No. 6,351,102. Claims 20-22 and 52 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6, 9, and 15 of U.S. Patent No. 6,351,102. Claims 23 and 47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5, 9, and 15 of U.S. Patent No. 6,351,102. Claims 24 and 25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9, 15, and 20 of U.S. Patent No. 6,351,102. Claim 29 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9 and 15 of U.S. Patent No. 6,351,102. Claim 40 is rejected on the ground of nonstatutory obviousness-type double

patenting as being unpatentable over claims 101, 9, and 15 of U.S. Patent No. 6,351,102. Claim

41 is rejected on the ground of nonstatutory obviousness-type double patenting as being

unpatentable over claims 53, 9, and 15 of U.S. Patent No. 6,351,102. Claim 44 is rejected on the

ground of nonstatutory obviousness-type double patenting as being unpatentable over claims

100, 9, and 15 of U.S. Patent No. 6,351,102. Claims 45 and 46 are rejected on the ground of

nonstatutory obviousness-type double patenting as being unpatentable over claims 9 and 15 of

U.S. Patent No. 6,351,102. Claim 49 is rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over claims 11 and 15 of U.S. Patent No. 6,351,102.

Claim 50 is rejected on the ground of nonstatutory obviousness-type double patenting as being

unpatentable over claims 12 and 15 of U.S. Patent No. 6,351,102. Claim 51 is rejected on the

ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13

and 15 of U.S. Patent No. 6,351,102. Claim 53 is rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 19, 9, and 15 of U.S. Patent

No. 6,351,102. Claim 54 is rejected on the ground of nonstatutory obviousness-type double

patenting as being unpatentable over claims 22, 9, and 15 of U.S. Patent No. 6,351,102. Claims

109, 111, and 112 are rejected on the ground of nonstatutory obviousness-type double patenting

as being unpatentable over claims 3, 6, 9, 15, and 101 of U.S. Patent No. 6,351,102.

Although the conflicting claims are not identical, they are not patentably distinct from

each other because it would have been obvious to a person of ordinary skill in the art at the time

of the invention to combine the appropriate claims (as mentioned above) in the device of U.S.

Patent No. 6,351,102, in order to provide a single tester that could carry out more functions,

which would in turn reduce the number of testing devices need by the user and increase the

efficiency of the device. (this obvious statement applies to all of the combinations of claims of

U.S. Patent No. 6,351,102 listed above)

5.   Claim 46 is also objected to under 37 CFR 1.75 as being a substantial duplicate of claim

45. When two claims in an application are duplicates or else are so close in content that they

both cover the same thing, despite a slight difference in wording, it is proper after allowing one

claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP

§ 706.03(k). It is believed that this is only a typographical error, and therefore, prosecution of

the claims will continue wherein claims 45 and 46 will both be treated by the same rejection.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-4, 9-22, 25, 29-35, 38-41, 44-46, 48-52, 56, 109, 111, and 112 are rejected

under 35 U.S.C. 102(e) as being anticipated by Gollomp (US 6,424,157).

With respect to claims 1 and 29, Gollomp discloses a battery charging system tester

configured to test a battery charging system of a vehicle, comprising: cabling configured to

electrically couple to a battery of the vehicle (col 6 ln 59-65 and seen in Fig. 7); a display

configured to display information (no. 128 in Fig. 7); a microprocessor (no. 100 in Fig. 7)

configured to: perform a battery test on the battery, perform a starter test on a starter of the

vehicle, and perform a charging system test on a charging system of the vehicle (col 3 ln 48-63

and abstract); providing outputs related to the battery test, starter test, and charger system test

(outputs eventually sent to the display in Fig. 7 and col 3 ln 50-57); and wherein the tester is

portable (whether the tester is implemented in the vehicle of Gollomp or next to the vehicle, it is

reasonably interpreted as portable, also see Fig. 7).

With respect to claims 2-4, Gollomp discloses a user input configured to receive a rating

standard selection which comprises a SAE standard (col 7 ln 63 to col 8 ln 5).

With respect to claims 9-12, Gollomp discloses wherein the battery test is based upon

conductance, resistance, impedance, and admittance (col 4 ln 1-27 and col 1 ln 40-42).

Furthermore, it is implied that the other values (conductance, impedance, and admittance) would

easily be calculated/used due to the fact that conductance is the reciprocal of resistance,

impedance is the summation of resistance and reactance, and admittance is the reciprocal of

impedance or the summation of conductance and susceptance. Therefore, all of those values are

technically based on resistance, which the reference clearly discloses.

With respect to claim 13, Gollomp discloses wherein an operator is instructed to start an

engine for the starter test (i.e. this is implied because the operator knows that the engine must be

started in order to carry out the starter test and col 6 ln 10-19).

With respect to claim 14, Gollomp discloses wherein one output comprises cranking

voltage (col 2 ln 35-45, Fig. 6, and col 13 ln 50-58).

With respect to claims 15-19, Gollomp discloses wherein the one output comprises an

output indicating "good battery", "good but recharge battery", "charge and retest battery",

"replace battery", and "bad cell- replace battery" (col 20 ln 55 to col 21 ln 5, col 10 ln 21-40, and

col 12 ln 14-19, especially note the various boxes in Fig. 2A-4D which have a "message" in

them). Additionally, applicant should notice that these claims comprise outputs that "indicate"

certain states, and therefore, the output does not have to exactly recite the language placed in

quotations (verbatim) by the applicant. For instance, it is implied that if you are notified that you have a bad cell or a bad battery, then it needs to be replaced, or if you have a battery with a low SOC, then it needs to be charged and retested. The examiner notes that alternate claim language (clarifying the content of the message output, especially if the output is a specific text message sent to and displayed by the display) could possibly overcome the reference.

With respect to claims 20-22, Gollomp discloses measuring a voltage when an engine of the vehicle is revved and no load is applied (col 4 ln 1-49), when the engine is idle and a vehicle load is applied (col 4 ln 34-39 and col 12 ln 1-13), and when the engine is revved and a vehicle load is applied (col 4 ln 1-49). Please note that since the battery test is continuously running (i.e. SOC monitoring and updating, among other tests), it is implied that the battery test will measure a voltage when the engine is being revved (i.e. that will happen under normal operation), both with and without loads applied.

With respect to claim 25, Gollomp discloses wherein the battery test is a function of temperature (col 4 ln 1-33).

With respect to claims 30-35, Gollomp discloses wherein an output comprises battery rating (col 14 ln 57 to col 15 ln 8 and col 7 ln 65 to col 8 ln 9), measured battery capacity (col 4 ln 1-30 and col 3 ln 49-53), voltage (col 4 ln 1-3), voltage during cranking (col 2 ln 35-45, Fig. 6, and col 13 ln 50-58), idle voltage (col 4 ln 34-39 and col 12 ln 1-13), and load voltage (col 4 ln 1-15).

With respect to claim 38, Gollomp discloses wherein a voltage across the battery is recorded (col 4 ln 1-18 and see rejection of claims 30-35 above).

With respect to claim 39, Gollomp discloses wherein the battery test is used to prevent

incorrectly identifying the charging system as being faulty (col 21 ln 5-30 and col 3 ln 49-57).

With respect to claim 40, Gollomp discloses an analog to digital converter (no. 122 in

Fig. 7).

With respect to claim 41, Gollomp discloses including an amplifier configured to couple

across a positive and a negative terminal of the battery (col 8 ln 62 to col 9 ln 11).

With respect to claims 44, 45, and 46, Gollomp discloses wherein the starter test is a

function of the battery test (col 11 ln 52-67, col 7 ln 48-53, and col 3 ln 48-63) and wherein the

charging system test is a function of the battery test (col 21 ln 5-30, col 7 ln 48-53, and col 3 ln

48-63).

With respect to claim 48, Gollomp discloses wherein the microprocessor is further

adapted to measure a starting voltage across the battery while a starting motor is actuated (col 11

ln 40-50 and col 12 ln 1-12).

With respect to claim 49, Gollomp discloses wherein the microprocessor provides an

output indicating that the battery requires charge if a starting voltage is low and the battery test

indicates that the battery is discharged (col 11 ln 15-60 and no. s211-s273 in Fig. 2A and 2B).

With respect to claims 50 and 51, Gollomp discloses wherein the microprocessor

provides a cranking voltage low output indication if the starting voltage is low and the battery

test indicates the battery is fully charged and a cranking voltage normal output if a starting

voltage is normal and the battery test indicates the battery is fully charged (col 13 ln 50 to col 14

ln 19, no. s211-s273 in Fig. 2A and 2B, and Fig. 6). Additionally, applicant should notice that

these claims comprise outputs that "indicate" certain states, and therefore, the output does not

have to exactly recite the language placed in quotations (verbatim) by the applicant.

With respect to claim 52, Gollomp discloses the aspects of this claim, as noted in the

rejection of claims 20-22 above, and see Fig. 2A and 2B.

With respect to claim 56, Gollomp discloses wherein the tester is portable (clearly seen

throughout reference) and wherein the battery test does not include a load test (col 4 ln 1-33 and

see explanation with rejection of claims 20-22).

With respect to claim 109, Gollomp discloses a battery charging system tester,

comprising a user input, a display, an electrical connection, an analog to digital converter, and a

microprocessor wherein the battery charging system tester is portable, as seen in the rejections of

claims 1, 2, 25, 29, 40, 48, and 52 above.

With respect to claims 111 and 112, see the rejections of claims 109, 44, and 45 above.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claims 23, 24, 28, 36, 37, 42, 43, 47, and 54 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Gollomp (US 6,424,157) in view of Roberts (US 6,570,385).

With respect to claims 23, 37, and 47, Gollomp discloses wherein DC voltages are

recorded (col 4 ln 1-39 and Fig. 6) by use of a DC voltage sensor, however, does not expressly

disclose wherein the charging system test includes measuring AC voltage ripple by use of an AC

voltage ripple detector, wherein an output is indicative of a presence of excessive diode ripple voltage, or wherein AC voltages are recorded.

Roberts discloses measuring AC voltage ripple by use of an AC voltage ripple detector (col 8 ln 64 to col 9 ln 28 and col 9 ln 65 to col 10 ln 15), and recording AC and DC voltages by use of sensors (col 9 ln 30-40 and col 10 ln 13-30), in order to provide a means to determine if the system has excessive ripple voltage and to provide sensed voltages which are used in the testing of the charging/starting system (to help determine any problems).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to measure AC voltage ripple and record AC voltages in the device of Gollomp, as did Roberts, so that problems caused by excessive voltage ripple can be prevented while also monitoring the AC and DC voltages (which provide information as to whether or not the rest of the system is operating at it's nominal condition).

With respect to claim 24, Gollomp does not expressly disclose including a user input configured to receive a temperature.

Roberts discloses a user input configured to receive temperature (col 15 ln 63 to col 16 ln 15), in order to provide temperature information to the system which will allow a proper analysis of the system (including the battery) because temperature can greatly alter the battery characteristics.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a user input for temperature in the device of Gollomp, as did Roberts, so that more accurate results can be attained with respect to the charging and cranking/starter systems (including the battery) which would help give a proper diagnosis of the system.

With respect to claim 28, Gollomp does not expressly disclose wherein an output is printed based upon a test.

Roberts discloses an output printed based upon a test (no. 66 in Fig. 1B and col 6 ln 6-17), in order to provide a copy of the results, which could be used for reference.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include an output printed based upon a test in the device of Gollomp, as did Roberts, so that a hard copy could be stored for referencing at a later time.

With respect to claims 36 and 54, Gollomp does not expressly disclose wherein the output is indicative of a presence of excessive diode ripple voltage or wherein an AC ripple voltage more than about 130 mV indicates a faulty diode or stator in the charging system.

Roberts discloses providing an output indicative of a presence of excessive diode ripple voltage and wherein an AC ripple voltage can indicate a faulty diode or stator in the charging system (col 9 ln 21-28 and col 14 ln 2-25), in order to provide earlier notification of problematic parts, therefore helping prevent larger problems that could occur.

It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate a faulty diode or stator in the charging system when the AC ripple voltage is more than 130 mV.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have an output indicating the presence of excessive diode ripple voltage and wherein an AC ripple voltage more than 130 mV could indicate a faulty diode or stator in the charging

system in the device of Gollomp, as did Roberts, so that additional components of the system

would be tested (further narrowing down the causes of different problems) and so that earlier

notification of problematic parts could be provided, which would in turn help prevent larger

problems that occur when an excessively variable voltage is present.

With respect to claim 42, Gollomp does not expressly disclose an amplifier coupled to

the battery through a capacitor.

Roberts discloses an amplifier coupled to a battery through a capacitor (seen in Fig. 4D

and col 10 ln 4-57), in order to amplify the battery test voltage, allowing various tests of the

battery including internal resistance and cold cranking ampere.

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to couple an amplifier to the battery through a capacitor in the device of Gollomp, as did

Roberts, so that additional testing concerning battery characteristics (such as internal resistance

and cold cranking ampere) could be provided, allowing the user to make a more accurate

decision on the status of the battery (i.e. should it be replaced or not).

With respect to claim 43, Gollomp does not expressly disclose including a battery voltage

scaling circuit, although, it could be implied that a scaling circuit exists in the device to provide

the output of Fig. 6, wherein the large variations in voltage can be seen on a single screen.

Roberts discloses a battery voltage scaling circuit (col 11 ln 58 to col 12 ln 5), in order to

provide proper scaling to offset any inaccuracies due to various types of connections or

connection lengths being used.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a battery voltage scaling circuit in the device of Gollomp, as did Roberts, so that inaccuracies due to long connections or different types of connection can be avoided.

9.   Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gollomp (US 6,424,157) in view of Parsonage (US 6,037,749).

With respect to claim 26, Gollomp does not expressly disclose wherein the microprocessor is configured to determine if surface charge exists on the battery.

Parsonage discloses wherein a microprocessor is configured to determine if surface charge exists on a battery (col 13 ln 59-61), in order to avoid improperly testing the battery's characteristics (wherein those results would have been otherwise affected by surface charge).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to determine if surface charge exists in the device of Gollomp, as did Parsonage, so that more accurate results for the battery's characteristics (i.e. voltage level and SOC) could be calculated after the surface charge was gone/removed.

10.   Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gollomp (US 6,424,157) and Parsonage (US 6,037,749) as applied to claim 26 above, and further in view of Roberts (US 6,570,385).

With respect to claim 27, Gollomp does not expressly disclose wherein the microprocessor prompts an operator to turn on headlights of the vehicle based upon a surface charge determination. Although, Parsonage does disclose the surface charge determination as seen in the rejection of claim 26 above. Furthermore, it is well known in the art that turning on a

load such as a headlight is an efficient and quick way to remove the surface charge of a vehicle

battery.

Roberts discloses wherein the microprocessor prompts an operator to turn on headlights

of the vehicle (col 18 ln 60 to col 19 ln 32), in order to place the starting/charging system in a

medium load or low idle condition, which provides the proper state for certain types of testing on

the vehicle (to give the most accurate measurements/results).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to have the microprocessor prompt the operator to turn on headlights based upon a surface

charge determination in the device of Gollomp, as did Roberts and Parsonage, so that the proper

state for testing can be attained which would give the most accurate measurements and results,

which would help properly diagnose the system.

11.   Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gollomp (US

6,424,157) in view of Cook (US 4,637,359).

With respect to claim 53, Gollomp does not expressly disclose wherein the

microprocessor is adapted to receive an input indicating that the vehicle contains a diesel engine

and wherein it waits for glow plugs of the engine to warm up.

Cook discloses wherein a microprocessor is adapted to receive an input indicating that

the vehicle contains a diesel engine and wherein it waits for glow plugs of the engine to warm up

(col 11 ln 4-20), in order to provide a tester that is compatible with a different vehicle type and

so that the engine can be properly prepared for testing/start-up.

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to adapt the microprocessor to receive an input indicating that the vehicle contains a diesel

engine and wherein it waits for glow plugs of the engine to warm up in the device of Gollomp, as did Cook, so that a testing device could be provided which would have a more widespread usage (i.e. compatible with different engine/vehicle types) and wherein the vehicle would be allowed to properly prepare for a testing condition (i.e. start-up).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Piggush whose telephone number is 571-272-5978. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AP

KARL EASTHOM
SUPERVISORY PATENT EXAMINER